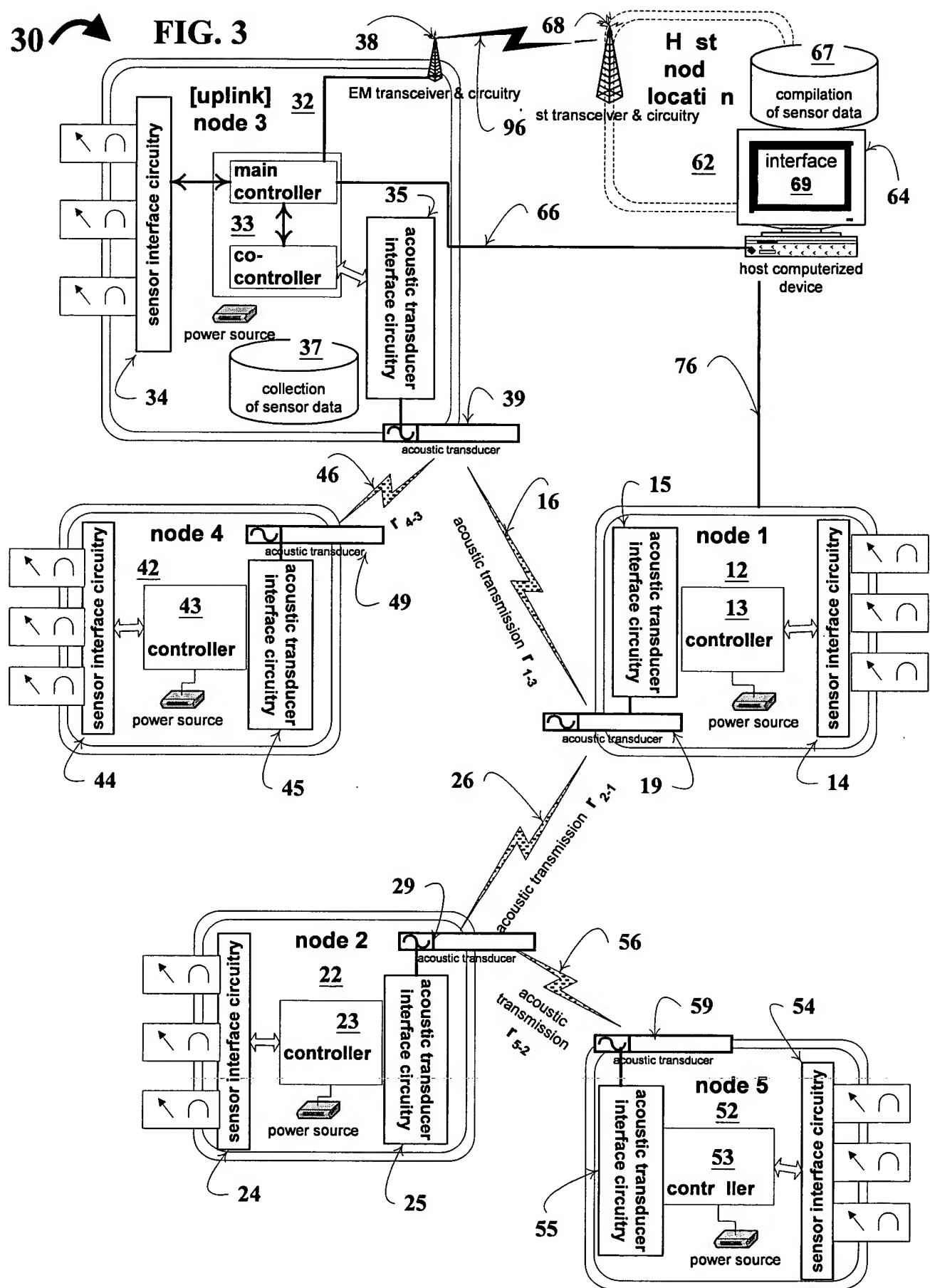


30 ↗

FIG. 3



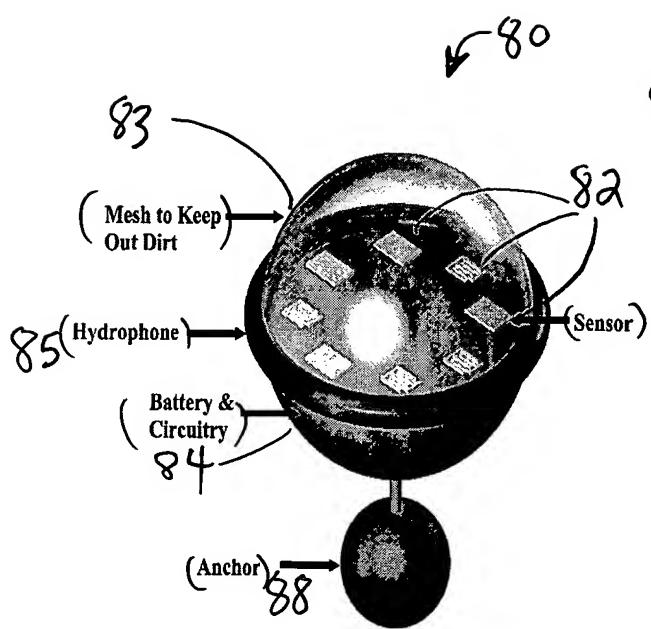


FIG. 4

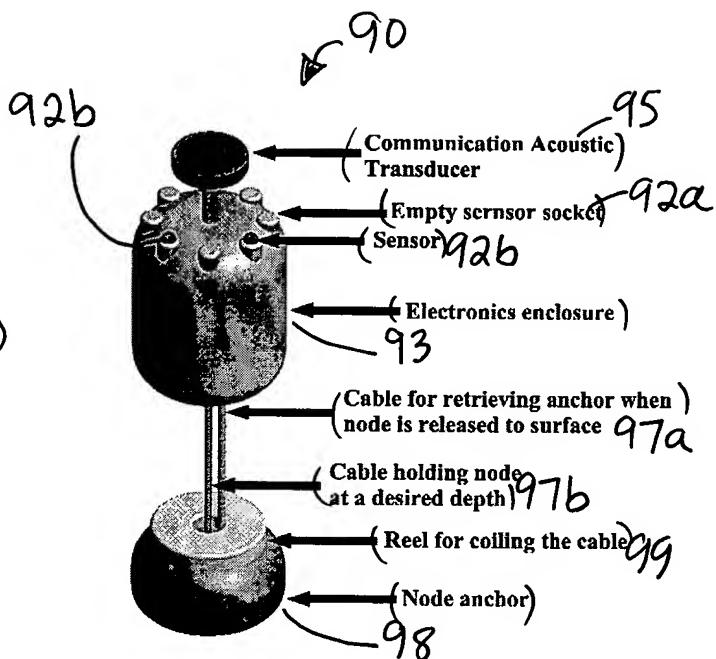


FIG. 5

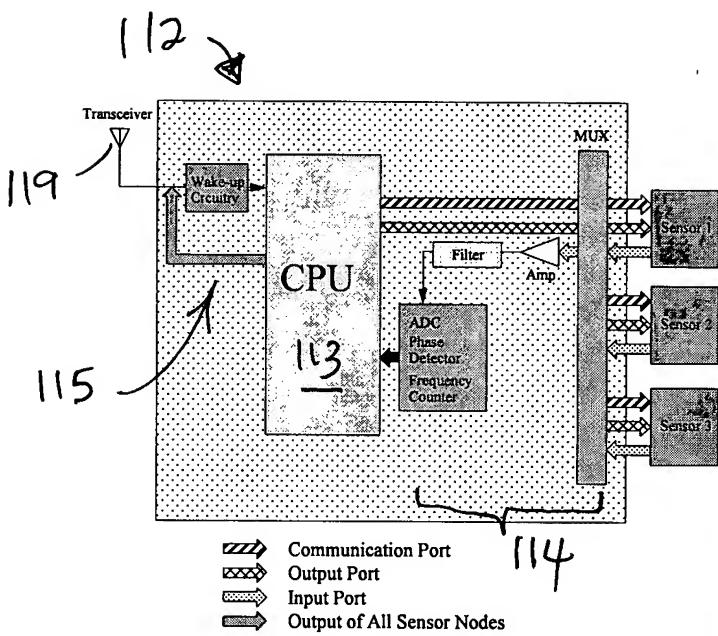


FIG. 6

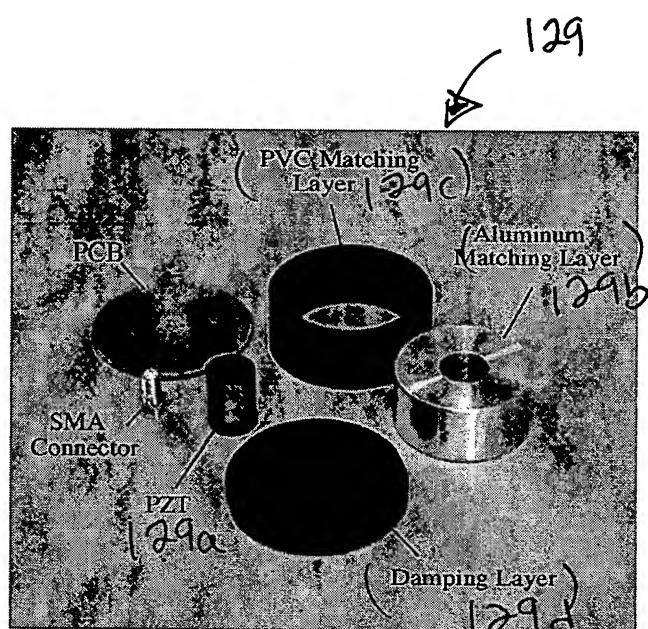


FIG. 7

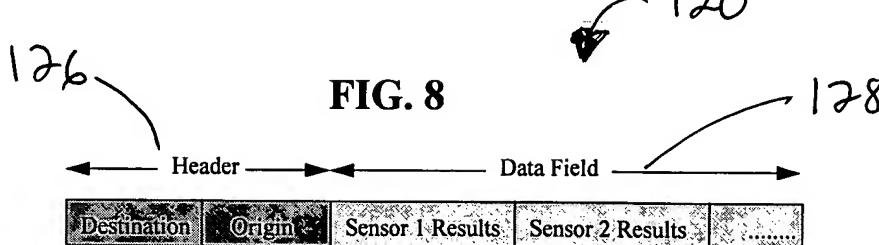
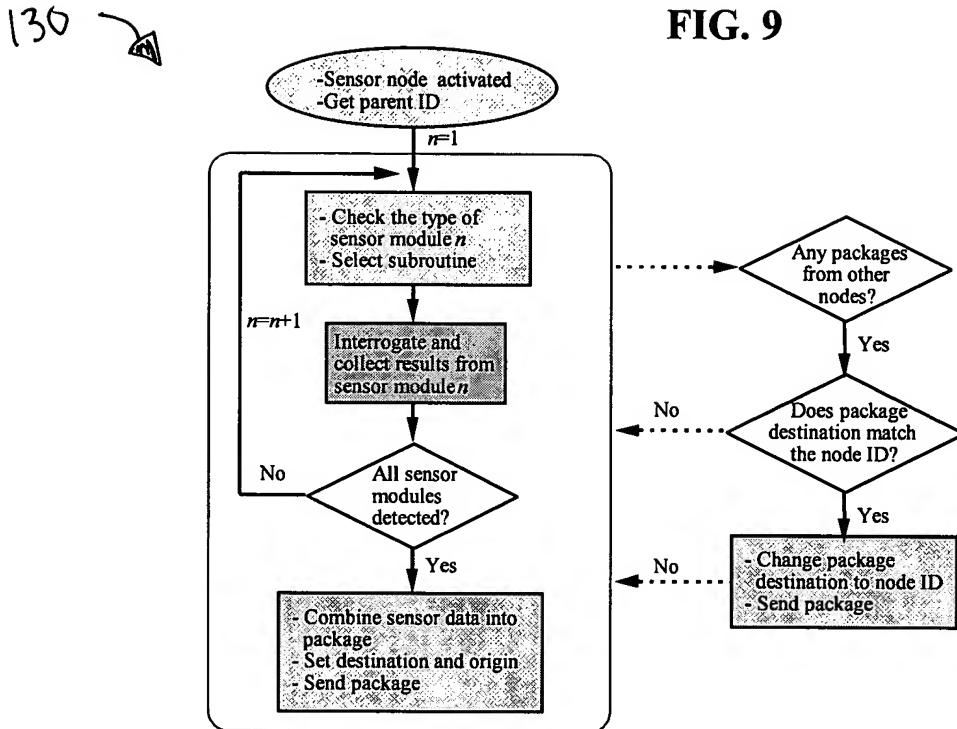
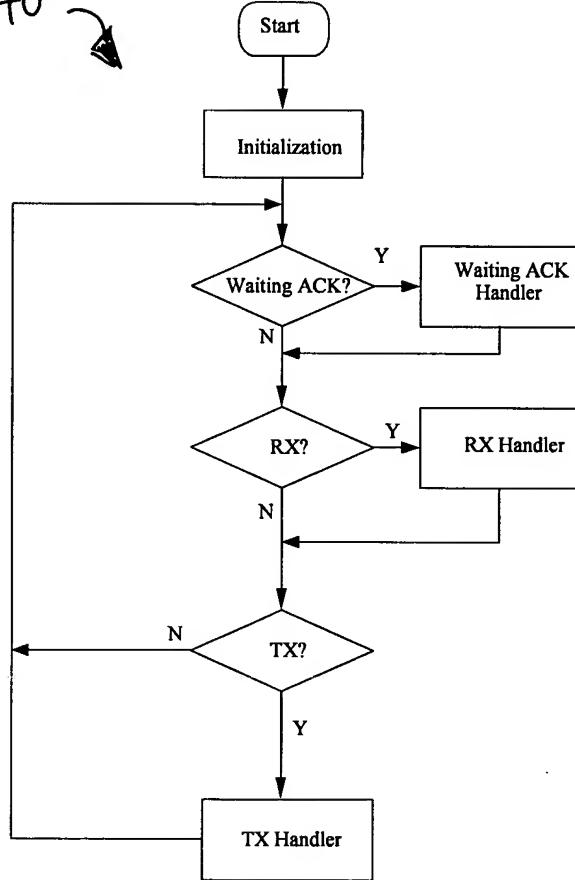


FIG. 8

FIG. 9



140 ↗



150 ↗

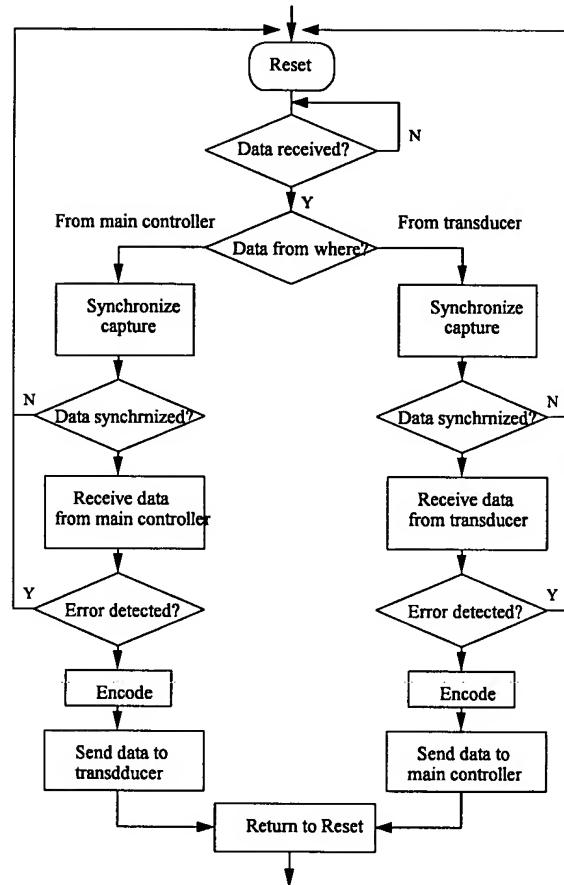


FIG. 10

FIG. 11

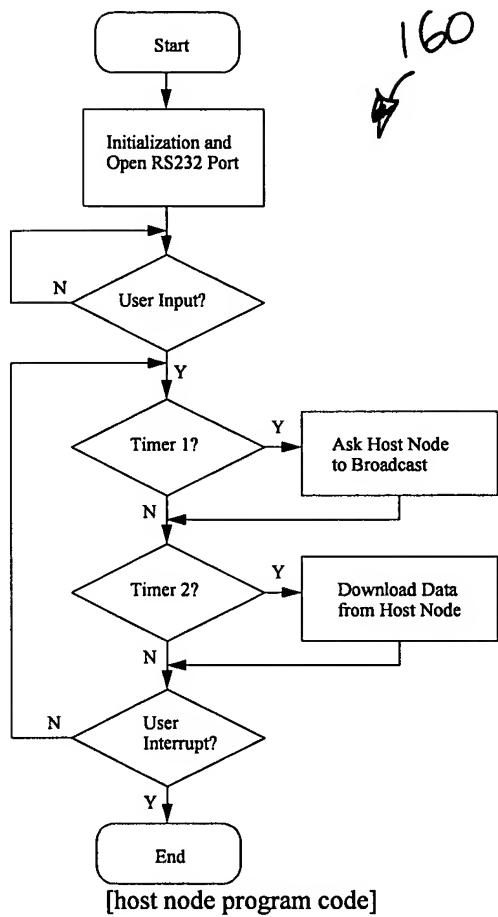


FIG. 12

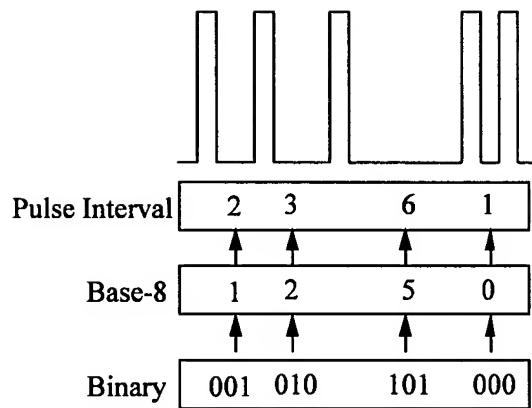
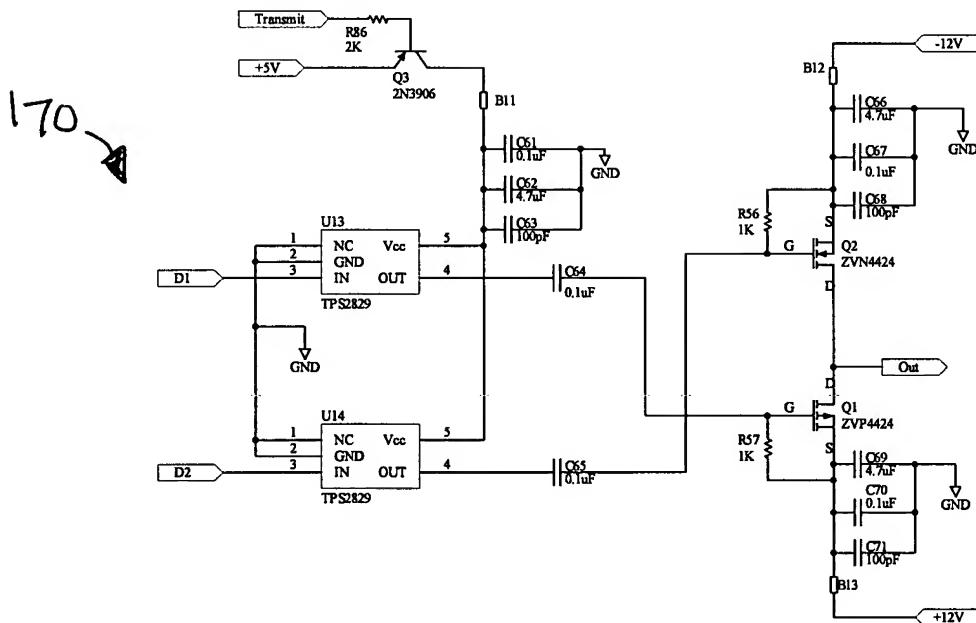
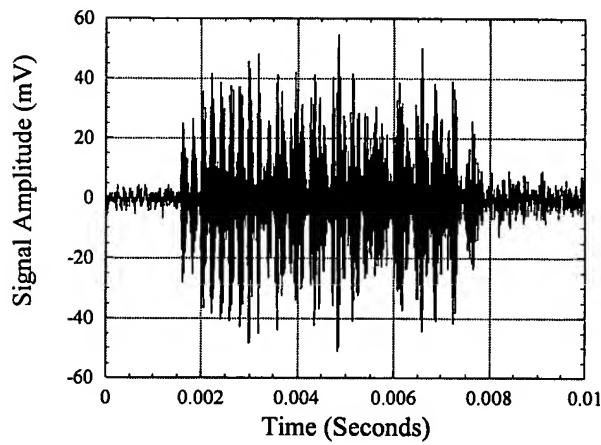


FIG. 14

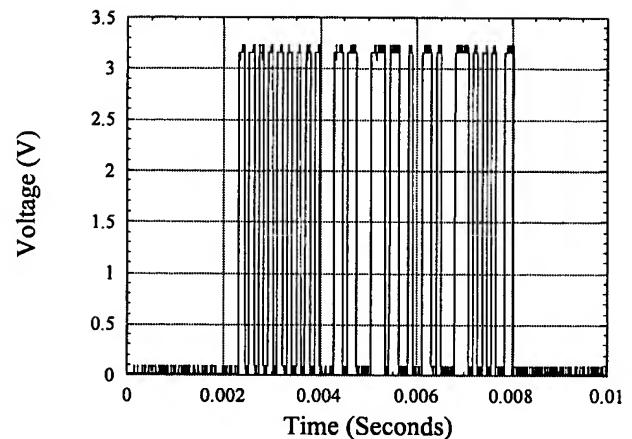
FIG. 13



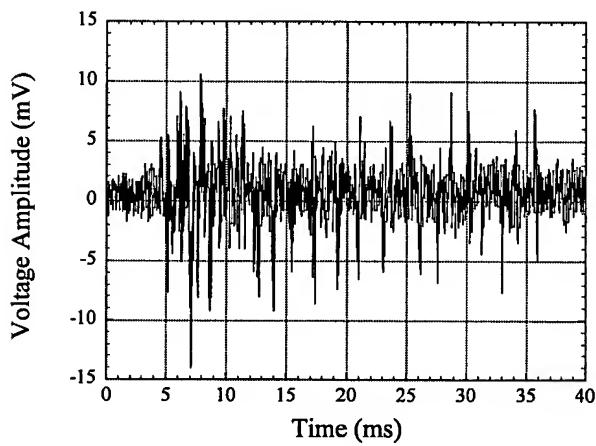
Circuitry to convert digital signals from the [main] node assembly controller to voltage pulses for the transducer.

FIG. 15A

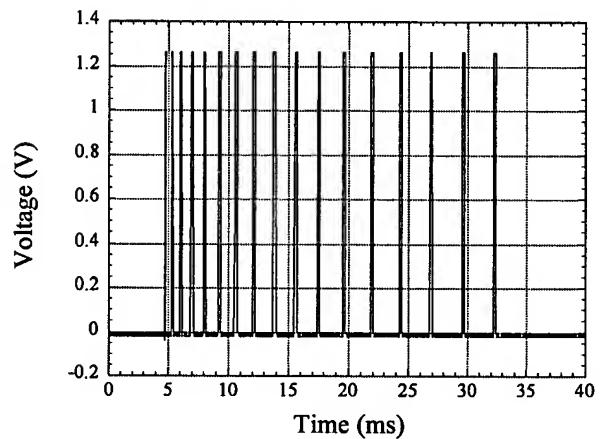
acoustic signals modulated using on-off (OOK) technique.

FIG. 15B

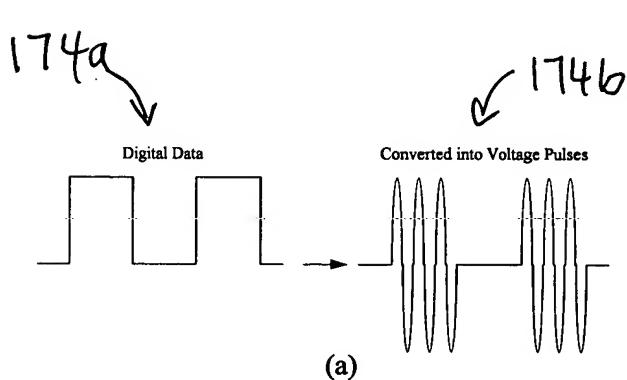
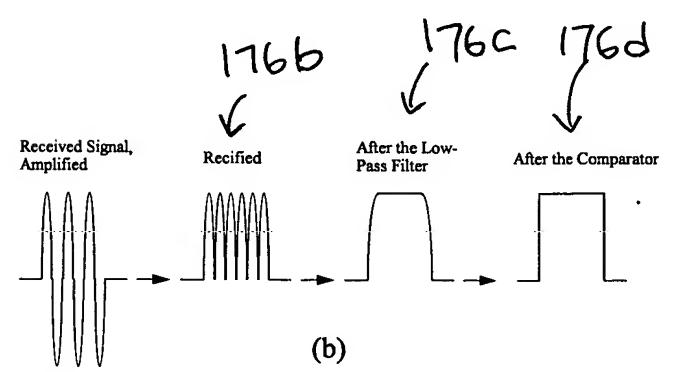
The digitized OOK modulated data package as converted

FIG. 16A

acoustic signals modulated using DPIM technique.

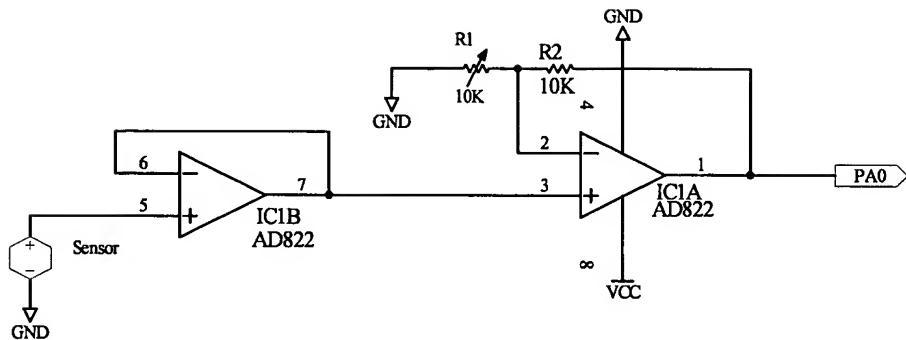
FIG. 16B

The digitized DPIM modulated data package as converted

**FIG. 17A****FIG. 17B**

180 ↗

FIG. 18



sensor interface circuitry for potential-based sensors (e.g., thermistors)

190 ↗

192 ↗

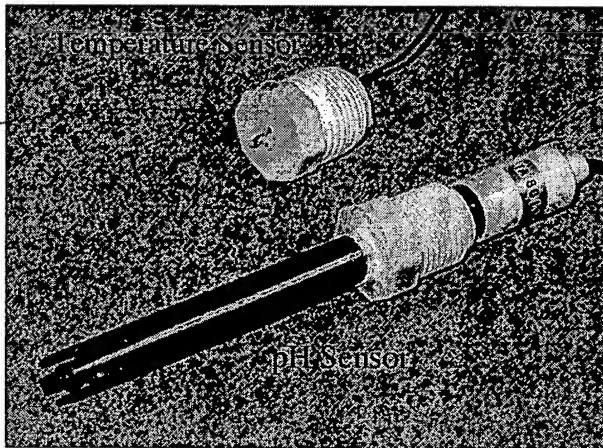


FIG. 19

200 ↗

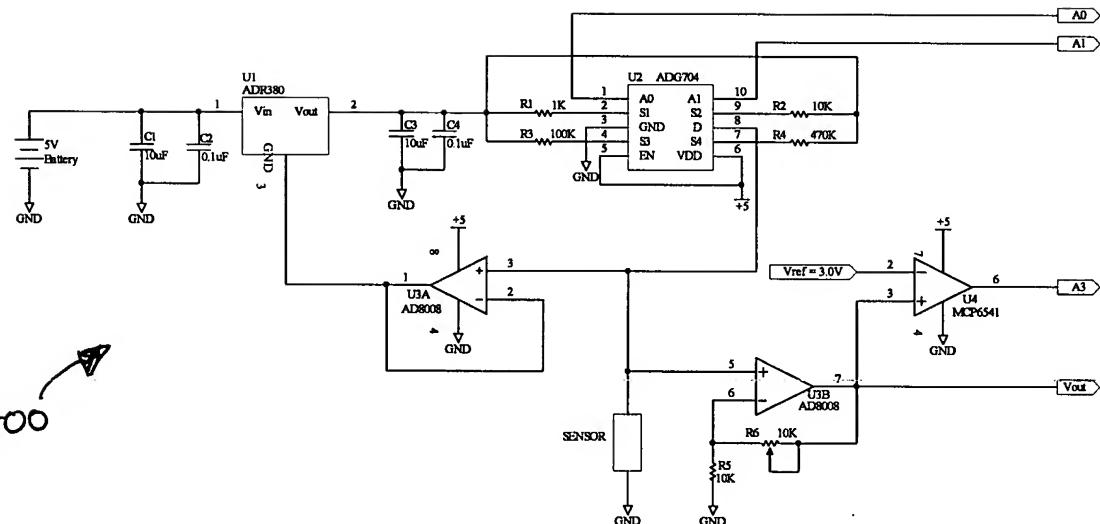


FIG. 20 sensor interface circuitry for resistive sensors.

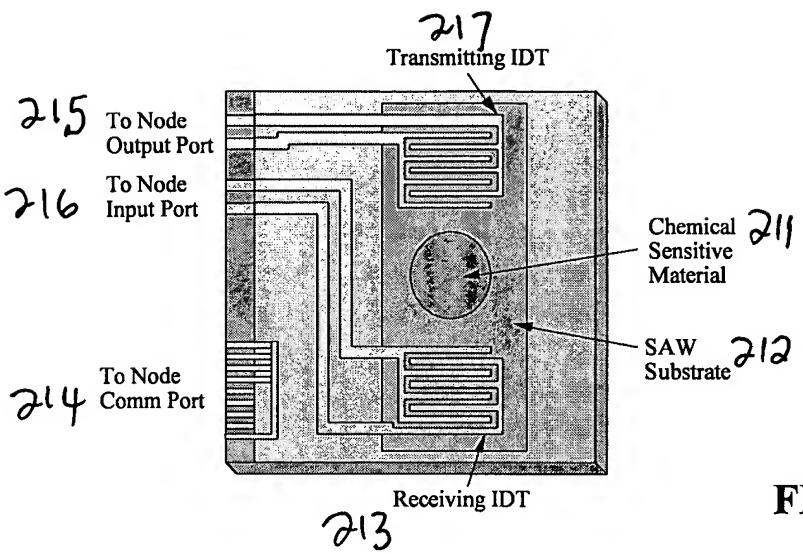


FIG. 21 SAW sensor module/element

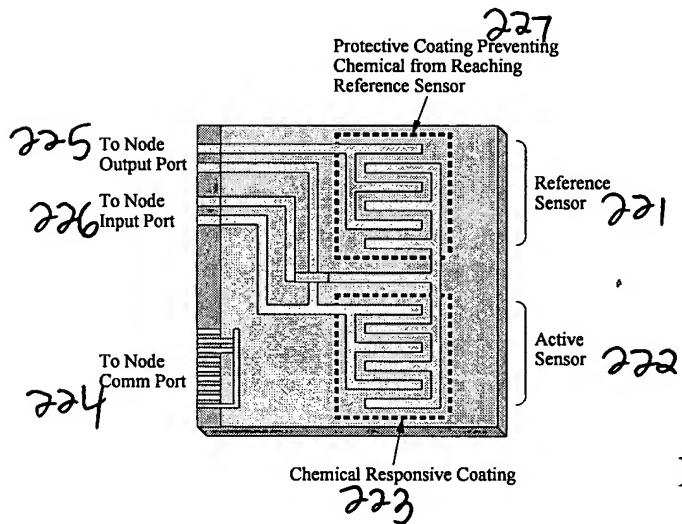


FIG. 22 Resistive/capacitive (impedance) sensor module/element

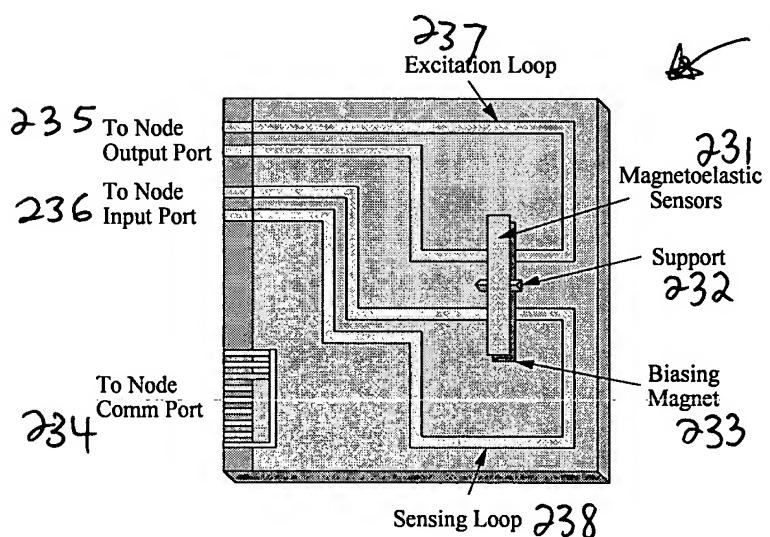


FIG. 23A

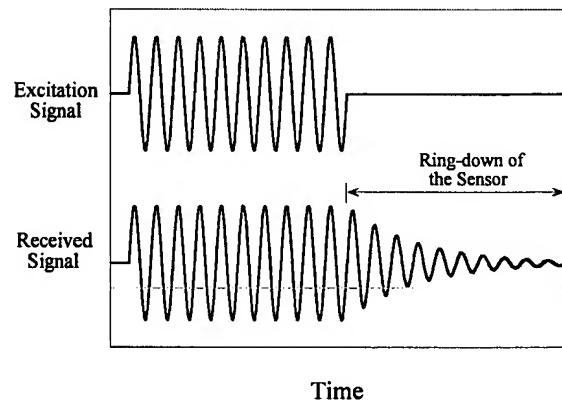


FIG. 23B

FIG. 24

